

REMARKS

The Applicants have now had an opportunity to carefully consider the comments set forth in the Office Action of September 30, 2004. Additionally, the Applicants had the opportunity to briefly discuss comments set forth in the Office Action with the Examiner. A summary of that conversation is provided below. The acknowledgement of allowable subject matter in **claims 4-6, 9, 10, 14-16, 19, 20, 24-26, 29, 30 and 43** is noted with appreciation. Nevertheless, reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action mailed September 30, 2004:

claims 4-6, 9, 10, 14-16, 19, 20, 24-26, 29, 30 and 43 were found to include allowable subject matter;

claim 39 was rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,405,028 B1 to DePaola, et al. ("DePaola");

claims 1, 7, 11, 17, 21 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over DePaola in view of U.S. Patent No. 6,397,055 B1 to McHenry, et al. ("McHenry");

claims 2, 12 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over DePaola in view of McHenry in view of U.S. Patent No. 6,628,772 B1 to McGrath, et al. ("McGrath");

claims 3, 8, 13, 23 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over DePaola in view of McHenry in view of McGrath and further in view of U.S. Patent No. 6,175,574 to Lewis ("Lewis");

claims 31 and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over DePaola in view of McHenry in view of U.S. Patent No. 6,219,551 B1 to Hentilä, et al. ("Hentilä"); and

claims 40-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over DePaola in view of Lewis.

Telephone Interview Summary

On or about October 12, 2004, a representative of the Applicants, Mr. Thomas Tillander, telephoned the Examiner, Mr. Ovidio Escalante to request clarification regarding the explanation of the rejection of claims 1, 11 and 21 presented in the Office

Action Mailed September 30, 2004. The Examiner confirmed that Mr. Tillander's interpretation of the Office Action was correct. No claims were discussed. No agreement was reached.

The Present Application

By way of brief review, the present application is directed to methods and systems for temporarily, diverting or "tandeming" an incoming call leg to an application node. Such tandeming is utilized to implement various advanced services, especially in mobile or other wireless environments. For example, tandeming can be used to implement --calling party pays-- services, --prepaid-- services, and --one-number services--. For calling party pays services, an application node generates billing and other information for telecommunications services to be billed to the calling party, rather than being billed to the called party. For prepaid services, the subscriber has prepaid for particular types of services, such as having paid in advance for an amount of communication time for wireless communication services. In this case, the application node verifies that the subscriber has made sufficient prepayment to receive the incoming call. For one-number services, the application node might, for example, aid in the sequential alerting of various telephones of the subscriber, such as alerting a home telephone, and if unanswered alert a mobile telephone, followed by a paging device. After the application node has performed its particular function, the call is directed back to the switch from whence it came for further call processing (e.g., see page 2, lines 8-11 of the present application).

The various embodiments disclosed in the present application use a new parameter, referred to as a --tandem parameter--, to designate whether an incoming call leg to a particular subscriber is to be tandemed or diverted to an application node or is to be delivered directly to the subscriber. In some embodiments, a database, such as, a home location register or a visitor location register, stores information such as a subscriber profile. The subscriber profile includes a tandem parameter. A switching center is configured to receive an incoming call leg directed to a called party directory number and to transmit a message to the database to determine call treatment instructions. The call treatment instructions include the tandem parameter. The tandem parameter may indicate whether or not to tandem the incoming call leg and what kind of tandeming is to be performed. If so, a routing parameter and digit analysis are performed and the switching center tandems or routes the incoming call leg to the

appropriate application node based on the routing parameter and digit analysis. A default mode is provided for the incoming call leg should the digit analysis not be performed successfully.

The Cited References

In contrast, the primary reference of the Office Action to DePaola allegedly discloses a network architecture and call processing logic that enables Calling Party Pays billing for calls to wireless subscribers, including calls that would otherwise leak through the billing operations of the principle carriers. A landline network, such as a LEC network, routes incoming calls to a wireless network and recognizes each call subject to calling party pays billing. If the LEC can bill charges to a party associated with the calling station, the LEC network routes the call to the mobile carrier's network and creates billing records for billing the air time. If the LEC cannot bill a calling station subscriber, the LEC network hands the call off to another switch, to select an appropriate one of two or more alternate billing facilities. The alternate billing facilities preferably include a clearing house and a credit card billing system. A database indicates whether it is possible to bill for the air time through the clearing house. If so, the switch completes the call to the mobile carrier's network and creates appropriate records to enable the clearing house to bill the air time to a subscriber associated with the calling station. If the call is not billable through the clearing house, the switch extends the call to the automated credit card billing system. The credit card system obtains credit card information from the caller and makes all necessary records to bill the air time charges for the call to the caller's credit card (Abstract).

DePaola makes reference to an LIDB database and indicates that if every subscriber of a wireless network has a record in the LIDB, those for subscribers with Calling Party Pays service would include a special indicator (column 15, lines 35-39). The Office Action appears to draw an analogy between this --special indicator-- and the --tandem parameter-- recited in the claims of the present application. However, while the special indicator of DePaola indicates that a Calling Party Pays service should be performed, the special indicator of DePaola does not indicate that Calling Party Pays service should be performed through tandeming, whereby when processing an application node is completed, the call leg is returned to the first node. For a further discussion of tandem parameters and tandeming, the attention of the Examiner is directed to the present application, as well as the Telephone Interview Summary and

the Reply to Response to Arguments sections of the Applicants' Amendment B.

It is respectfully submitted that instead of disclosing or suggesting providing a Calling Party Pays service through tandeming, as recited in claims of the present application, DePaola discloses a system where a call leg is switched from device to device. For example, referring to FIG. 2 of DePaola, a call is routed to a device referred to as a tandem (S2). The tandem makes a query (S3) and either plays an announcement (S7) or routes the call to an MSC (S5), which completes the call (S6). If the announcement is played (S7), the call is either routed to a switch with normal signaling (S12) or it is routed to an MSC with special signaling (S14), which completes the call without recording air time (S15).

The Office Action asserts that DePaola discloses tandeming the incoming call leg to the application node and directs the attention of the Applicants to column 16, lines 6-27 in support of this assertion. Column 16, lines 16-18, indicates that --Alternatively, the tandem 33 could connect the call to an external platform such as an intelligent peripheral to provide the announcement--. However, it is respectfully submitted that such a connection to an external platform is not at the direction of a tandem parameter or even at the direction of the special indicator described by DePaola. The special parameter of DePaola simply indicates that a Calling Party Pays service should be provided and is silent as to how the service is accomplished. Furthermore, DePaola does not disclose or suggest obtaining a routing parameter and performing digit analysis in order to select an appropriate application node to which to route the call (e.g., page 17, lines 11-12).

For at least the foregoing reasons, it is respectfully submitted that DePaola does not disclose or suggest a tandem parameter or tandeming as disclosed and claimed in the present application.

McHenry allegedly discloses a system and method for mobile-to-mobile call delivery for a Calling Party Pays wireless service. Landline facilities are linked to a wireless mobile network. The wireless mobile network is provided with the ability to recognize that a called wireless station is a Calling Party Pays subscriber. For example, in one preferred embodiment, a range of telephone numbers is pre-designated for assignment to Calling Party Pays subscribers (column 6, lines 29-31). It is respectfully submitted that McHenry does not disclose or suggest a tandem parameter. Furthermore, McHenry does not disclose obtaining a routing parameter and performing digit analysis when a received tandem parameter indicates tandeming. The Office

Action asserts that McHenry teaches a CPP system in which the network will perform digit analysis of the called party directory number and directs the attention of the Applicants to column 11, lines 52-62, and column 12, lines 1-23, in support of this assertion. However, the Applicants have reviewed the cited sections of McHenry and have been unable to find any disclosure or suggestion of performing digit analysis or obtaining a routing parameter. Instead, column 12, lines 6-9, indicated that by virtue of identifying the trunk from which the call has been routed as an MSC link, the tandem is alerted that additional treatment by the tandem is required. In this regard, it is respectfully submitted that this subject matter of McHenry is similar to the prior art described, for example, at page 2, lines 12-17, of the present application.

McGrath allegedly discloses a method for providing enhanced directory assistance, upon command, using out-of-band signaling. In the method of McGrath, a user calls a directory assistance service provider to search for a desired telephone number and be connected to a party at the desired number. In one such connection, the user is afforded enhanced directory assistance upon a user command in the form of an out-of-band signaling message, e.g., SS7 signaling message. For example, the user may be afforded further operator assistance by pushing on the user telephone a predetermined key (e.g., "*" key), which is detectable by the directory assistance service provider as an SS7 signaling message (Abstract).

Lewis allegedly discloses a technique for providing an improved signaling network for telephone systems. A technique is provided within each central office in a digital cluster, for translating a destination number for a signaling message into a destination point code. Through the technique of Lewis, an SS7 signaling processing system first translates a destination number into a destination point code. The destination point code is then incorporated into a signaling message. The signaling message is subsequently routed to a destination node that corresponds to the destination point code. The destination point code indicates either a central office within a cluster or an STP outside the cluster. Lewis asserts that use of this technique eliminates the need to translate the destination number into the destination point code without accessing an SS7 node outside of the central office cluster (Abstract).

Hentilä allegedly discloses a method for locating a called subscriber. In a first mode of operation, parallel paging, a service does not know at which number the called subscriber can be reached. A paging message is transmitted substantially simultaneously to all the numbers determined for the subscriber regardless of which

network the number is associated with. The call is connected to the number at which the call is first answered. In the second mode of operation, precision paging, the service knows at which number of the plurality of numbers stored in a database the called party can be reached. The paging message is thus transmitted and the call is thus connected to this number only (Abstract).

The Claims are not Anticipated

Claim 39 was rejected under 35 USC §102(e) as being anticipated by DePaola. In explaining this rejection, the Office Action asserts that DePaola discloses a tandem parameter. However, in so doing, the Office Action does not make reference to a parameter. Instead, the Office Action makes reference to a TCAP call control type response message.

Additionally, the Office Action asserts that DePaola discloses the tandem parameter comprising a second predetermined value designating that tandeming is to be performed for the incoming call leg to the network switch, whereby the network switch is directed to route in the incoming call leg to an application node (external platform, e.g., IP/CPN node) and to receive the call leg from the application node when processing by the application node is completed. In support of these assertions, the Office Action directs the attention of the Applicants to column 16, lines 6-14; column 16, lines 14-27; and column 17, lines 22-35.

Column 16, lines 6-14, describes steps that lead to providing a caller with an announcement regarding a service if a record in the LIDB identifies a dialed number as that of a subscriber having CPP service. However, it is respectfully submitted that CPP service can be provided without tandeming, and DePaola allegedly discloses such a service.

Column 16, lines 14-27, describes the playing of announcement. For example, column 16, lines 14-16, indicate that the switch 33 connects the call to an internal announcement platform (not separately shown) to provide an audible prompt. The following lines (16-18) indicate that, alternatively, the tandem 33 could connect the call to an external platform, such as an intelligent peripheral, to provide the announcement. However, it is respectfully submitted that such an alternative method for providing the announcement is not designated by the record in the LIDB or by the special indicator discussed at column 15, lines 35-40.

Therefore, even if the LIDB record is found to be analogous to a parameter,

DePaola does not disclose or suggest tandeming directed or designated by a parameter. **Claim 39** recites a second predetermined value, the second predetermined value designating that tandeming is to be performed for the incoming call leg to the network switch, whereby the network switch is directed to route the incoming call leg to an application node and to receive the call leg from the application node when processing by the application node is completed.

It is respectfully submitted that DePaola does not disclose or suggest a tandem parameter comprising a second predetermined value, the second predetermined value designating that tandeming is to be performed. The record in the LIDB only indicates that Calling Party Pays service is to be performed.

For the foregoing reasons, **claim 39**, as well as **claims 40-43** which depend therefrom, is not anticipated by DePaola.

The Claims are not Obvious

Claim 1, 7, 11, 17, 21 and 27 were rejected under 35 USC §103(a) as being unpatentable over DePaola in view of McHenry. In explaining the rejections of **claims 1, 11 and 21**, the Office Action asserts that DePaola discloses receiving a second message containing a tandem parameter. In support of this assertion, the Office Action directs the attention of the Applicants to column 15, lines 45-53. However, column 15, lines 45-53, describe a record in a database. It is respectfully submitted that a record in a database is not a parameter.

Additionally, the Office Action asserts that DePaola discloses that when the tandem parameter does indicate tandeming, obtaining a routing parameter. In support of this assertion, the Office Action directs the attention of the Applicants to column 15, line 54 – column 16, line 16. However, column 15, line 54 – column 16, line 5, describe processing when the LIDB record does not indicate that Calling Party Pays processing is appropriate. Column 16, lines 6-16, describes processing that occurs if the record in the LIDB database identifies that the dialed number is that of a subscriber having a CCP service. It is respectfully submitted that none of the referenced section discloses or suggests a routing parameter. Even if the LIDB record is fairly interpreted to be a parameter, the LIDB record does not direct or designate tandeming and DePaola does not disclose or suggest obtaining a routing parameter in response to receiving a tandem parameter having a value indicating tandeming.

The Office Action also asserts that DePaola teaches performing digit analysis

and directs the attention of the Applicants to column 15, lines 35-44. However, the cited portion recites that “the LIDB database could make the determination in a number of ways. If every subscriber of the wireless carrier has a record in the LIDB, those for subscribers with Calling Party Pays service would include a special indicator. Preferably, only the wireless subscribers with the Calling Party Pays will have records in the LIDB database. The presence or absence of a record associated with a called subscriber’s mobile telephone number indicates whether or not that called station subscriber has the Calling Party Pays service.”

It is respectfully submitted that this portion does not disclose or suggest performing digit analysis. Furthermore, the cited passage does not disclose or suggest performing digit analysis after receiving a tandem parameter indicating tandeming and obtaining a routing parameter. Indeed, the Office Action stipulates that DePaola does not disclose performing digit analysis of the called party directory number when the tandem parameter does indicate tandeming and processing the call based on the digit analysis of the called party number.

The Office Action relies on McHenry for this disclosure and directs the attention of the Applicants to column 11, lines 52-62, and column 12, lines 1-51. However, the Applicants have reviewed the cited portions and have been unable to locate any disclosure or suggestion of performing digit analysis of the called party directory number when a tandem parameter indicates tandeming and processing the call based on the digit analysis. Indeed, column 12, lines 6-8, disclose alerting a tandem that additional treatment by the tandem is required by virtue of identifying the trunk from which the call has been routed. As noted above, this methodology appears to be similar to that of the prior art described on page 2 at lines 12-17 of the present application. Clarification is respectfully requested.

Additionally, even if McHenry cures the deficiencies of DePaola, the Office Action does not suggest a motivation for combining the subject matter of DePaola and McHenry. It is respectfully submitted that there is no motivation in the art to combine the disclosures of McHenry and DePaola. It is respectfully submitted that even if McHenry included the subject matter for which it is relied upon, the only motivation to combine McHenry with DePaola would be found in the present application. Therefore, the rejections of **claims 1, 11 and 21** are based on impermissible hindsight.

For at least the foregoing reasons, **claims 1, 11 and 21** as well as **claims 2-10, 12-20 and 22-38**, which depend respectively therefrom, are not anticipated and are not

obvious in light of DePaola and McHenry taken alone or in any combination.

Regarding **claim 33**, the Office Action asserts that DePaola, as applied to **claim 21**, teaches wherein the switching center is a mobile switching center. However, while disclosure of DePaola makes references to mobile switching centers and wireline stations, in the analogies drawn by the Office Action, it is the tandem switch 33 of DePaola that is coupled to the adjunct network entity and to the database (as recited in claim 21). In this regard, DePaola does not disclose or suggest wherein the switching center is a mobile switching center as recited in **claim 33**.

Regarding **claim 34**, the Office Action asserts that DePaola, as applied to **claim 21**, teaches wherein the switching center is a wireline switching center. However, as explained above, in the analogies of the Office Action, it is the tandem switch 33 of DePaola that is connected to the adjunct network entity and to the database. It is respectfully submitted that even DePaola draws a distinction between the tandem switch 33 and a wireline switch (e.g., 51). Therefore, DePaola does not disclose or suggest the switching center is a wireline switching center as recited in **claim 34**.

Regarding **claim 35**, the Office Action asserts that DePaola, as applied to **claim 21**, teaches wherein the application node is a prepaid telecommunications service and directs the attention of the Applicants to column 15, lines 28-44, in support of the assertion. However, it is respectfully submitted in the analogies of the Office Action, the application node is an intelligent peripheral used to provide an announcement (column 16, lines 16-18). It is respectfully submitted that DePaola does not disclose or suggest an application node for providing Calling Party Pays services. Instead, in the system of DePaola, the tandem (FIG. 2, S2) provides the Calling Party Pays services. Therefore, DePaola does not disclose or suggest the application node is a Calling Party Pays service.

Arguments similar to those submitted in support of **claim 35** are submitted in support of **claim 36**.

Regarding **claim 37**, the Office Action asserts that DePaola, as applied to **claim 21**, teaches wherein the application node is a one-number telecommunications service node which sequentially alerts telephones of a subscriber. In support of this assertion, the Office Action directs the attention of the Applicants to FIG. 1; column 17, lines 23-35; and column 20, lines 44-56. However, it is respectfully submitted that FIG. 1 makes no reference to sequential alerting. Column 17, lines 23-35, describes steps that happen when a calling party provides a PIN or the system determines that the calling

party is included on a VIP list exception to the Calling Party Pays service. In that event, the tandem routes the call to an MSC with normal signaling (S5), and the MSC completes the call and records air time (S6). It is respectfully submitted that the cited portion of column 17 does not disclose or suggest a one-number telecommunications service node which sequentially alerts telephones of subscriber. Column 20, lines 44-56, describes activities that occur when the called station answers a call and activities that occur when one or the other of the parties to the completed call ends the connection, typically by hanging up their respective station. It is respectfully submitted that column 20, lines 44-56, do not disclose or suggest a one-number telecommunications node which sequentially alerts telephones of a subscriber.

For at least the foregoing additional reasons, **claims 33-37** are not anticipated and are not obvious in light of DePaola and McHenry taken alone or in any combination.

Claims 2, 12 and 22 were rejected under 35 USC §103(a) as being unpatentable over DePaola in view of McHenry in view of McGrath. In explaining these rejections, the Office Action stipulates that DePaola in view of McHenry do not disclose transmitting a third message to the database, the third message indicating a tandeming failure. Instead, the Office Action asserts that McGrath discloses that if a call cannot be tandemed to a VRU, a fail route message is sent to the database.

However, it is respectfully submitted that the cited portion of McGrath discloses that if the voice response unit (VRU) 30 is operational, it is commanded to play a signoff message. If the VRU is not available, the operator speaks the signoff message before initiating a transfer. The VRU status is known by whether the call is initiated by a VRU played greeting or by a ZIP tone. Failed routing attempts cause reorder tones to be returned to the operator's handset or an error indication to be returned to database server 26. McGrath does not disclose or suggest transmitting a third message to the database indicating a tandeming failure. It is respectfully submitted that McGrath does not disclose or suggest tandeming at all. Instead, McGrath discloses a method for providing enhanced directory assistance (see FIG. 5 – FIG. 8).

Additionally, the Office Action provides no motivation for combining the subject matter of McGrath with the subject matter of DePaola and McHenry. It is respectfully submitted that even if McGrath cured the deficiencies of DePaola and McHenry, the only motivation to make the suggested combination would be found in the present application. Therefore, the rejections of **claims 2, 12 and 22** would be based on impermissible hindsight.

For at least the foregoing additional reasons, **claims 2, 12 and 22**, as well as **claims 3-6, 13-16 and 23-26**, which depend respectively therefrom, are not anticipated and are not obvious in light of DePaola, McHenry and McGrath taken alone or in any combination.

Claims 3, 8, 13, 23 and 28 were rejected under 35 USC §103(a) as being unpatentable over DePaola in view of McHenry in view of McGrath and further in view of Lewis. **Claims 3 and 8** depend from **claim 1**. **Claim 13** depends from **claim 11**. **Claims 23 and 28** depend from **claim 21**. **Claims 3, 8, 13, 23 and 28** are patentably distinct and are not obvious for at least those reasons. Additionally, even if Lewis discloses or suggests single octets or a plurality of octets or SS messages, as asserted by the Office Action, Lewis does not disclose or suggest a tandeming parameter, a tandeming parameter being a pre-designated value of a single octet, a tandeming parameter being a pre-designated value of a single octet field within an ANSI compatible Calling Features Indicator parameter or that a tandeming failure is indicated as a predetermined value in an ANSI compatible redirection reason.

For at least the foregoing additional reasons, **claims 3, 8, 13, 23 and 28** are unanticipated and are not obvious in light of DePaola, McHenry, McGrath and Lewis taken alone or in any combination.

Claims 31 and 32 were rejected under 35 USC §103(a) as being unpatentable over DePaola in view of McHenry in view of Hentilä. **Claims 31 and 32** depend from **claim 21** and are not anticipated and are not obvious for at least those reasons.

Claims 40-42 were rejected under 35 USC §103(a) as being unpatentable over DePaola in view of Lewis. In explaining these rejections, the Office Action stipulates that DePaola does not disclose wherein the parameter is encoded as an octet. Instead, the Office Action asserts that Lewis discloses that it is well known in the art to receive signaling messages and that signaling messages are encoded as a single or as a plurality of octets. However, **claims 40-42** depend from **claim 39** and are not anticipated and are not obvious for at least that reason. Additionally, even if Lewis teaches signaling messages are encoded as a single or plurality of octets, Lewis does not disclose or suggest that a tandem parameter is encoded as a single or plurality of octets or that a tandem parameter is encoded as a field within an ANSI compatible calling feature's indicator parameter.

For at least these additional reasons, **claims 40-42** are not anticipated and are not obvious in view of DePaola and Lewis taken alone or in any combination.

Telephone Interview Request

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1-43 remain in the application. For the reasons cited above, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & McKEE, LLP

January 31, 2005
Date

Joseph D. Dreher

Joseph D. Dreher, Reg. No. 37,123
Thomas Tillander, Reg. No. 47,334
1100 Superior Avenue
7th Floor
Cleveland, Ohio 44114-2579
(216) 861-5582

Certificate of Mailing

Under 37 C.F.R. § 1.8, I certify that this Amendment is being

- ☒ • deposited with the United States Postal Service as First Class mail, addressed to: MAIL STOP AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.
- ☐ transmitted via facsimile in accordance with 37 C.F.R. § 1.8 on the date indicated below.
- ☐ deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated below and is addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Express Mail Label No.:
Date January 31, 2005

Signature <i>Roseanne Giuliani</i>
Printed Name Roseanne Giuliani